Table 1

Year	Psychiatry OPD	Collectorate camp	Certification by Psychiatrists	Certification by Allied Departments	TOTAL CERTIFICATIONS	X2(0.01), X2(0.05),X2	P
2013	199	187	386	2	388		
2014	170	16	186	15	201	15.0863	<0.001**
2015	119	18	137	16	153	11.0705	Sig.
2016	180	89	269	11	280	df = 5	
2017	169	90	259	22	281	226.16492,	
2018	88	90	178	92	270	p = 0.000000 **	

Table 2

codes used

	Certification diagnostic pattern within Psychiatric Department	2017				2018				X2(0.01), X2(0.05),X2	P
		Psy OPD	Psy collector	TOTAL PSY D	other dept	Psy OPD	Psy collector	TOTAL PSY D	other dept		
1	Autism spectrum disorders	12	0	12	1	12	0	12	2		
2	Specific Learning disorders	4	24	28	0	0	0	0	44		
3	Intellectual disability	41	0	41	18	22	0	22	46	20.0902	<0.001**
4	Chronic neurological conditions with psychiatric complications	2	0	2	3	0	14	14	0	15.5073	Sig.
5	Organic psychosis	32	0	32	0	17	0	17	0	df = 8	
6	Major depressive disorder	5	29	34	0	4	15	19	0	39.327198,	
7	Bipolar affective disorder	15	28	43	0	8	31	39	0	p = 0.000004 **	
8	Schizophrenia and related disorders	55	2	57	0	16	30	46	0		
9	Obsessive compulsive disorder	3	7	10	0	9	0	9	0		
	TOTAL	169	90	259	22	88	90	178	92		

[redacted]

Table 3.1	Socioeconomic status (monthly income-based)	2017				2018				X^2	p
code		Psy OPD	other dept	camp	Total	Psy OPD	other dept	camp	Total		
1	<INR1000 /dLow SE status (<INR30000/mon)	169	20	0	189	88	92	15	195	X2(0.01) = 9.2103	0.002**
2	1000-2999/dMedium SE status (INR30000-90000)	0	2	77	79	0	0	48	48	X2(0.05) = 5.9915	
3	>=3000/day High SE status (>90000)	0	0	13	13	0	0	27	27	X2 = 12.345999, df = 2	p = 0.002085 **

Table4		2017				2018									
		M	SD	95% CI	95% CI	M	SD	95% CI	95% CI	F0 Var	p(Fo)	t1	p0	to	p
Row 4.1	Time interval between application and procurement of certificate (days)	10.22	4.63	9.27	11.18	1.56	1.01	1.34	1.77	20.978	0.0	14.41	<0.001**	Welch17.56	<.001**
4.2	Number of diff Departments gone through	2.64	0.49	2.525	2.747	1.35	0.48	1.25	1.46	1.073	0.75	7.65	<0.01*	Student17.8	<.001**
4.3	Number of sessions(hrs) of active assessment needed														
4.3.1	for Clinical Mental Status Examination and IDEAS assessment	1.35	0.42	1.26	1.43	1.37	0.54	1.26	1.48	1.64	0.027	1.36	0.17	Welch0.38	0.707
4.3.2	for assessment including Specific Rating scales	4.69	1.89	4.295	5.075	0	0	0	0	infinity~~~~	0.0	4.64	<.001**	Welch23.85	<.001**
4.4	Time interval between diagnosis and certification (in months)	18.25	5.22	17.17	19.33	9.83	4.12	8.97	10.70	1.61	0.029	6.33	<0.01*	Welch12.08	<.001**
4.5	Number of caregiver-days spent for procuring certificate	6.25	2.51	5.73	6.77	1.79	1.09	1.56	2.02	5.34	5.53E-14	10.45	<0.001*	Welch15.65	<.001**

	A	B	C	D	E	F	G	H	I	J	K	L	M	N
1	GROUP 1 2017	k-anonymized de-identified datasets					GROU	2017						
2	codes	Name	Sex	SEstatus	Diagnosis heads1	TIMINTERVAL applic-procure	NUM DEPT	NUMSESSIONS mse/ ideas	NUMSESSIONS scales	TIMINTERV	CG DAYS			
3		*	*	2	7	10	2	0.5	2	15	2.5			
4		*	*	2	2	11	2	1	8	18	9			
5		*	*	1	1	1	2	0.5	5	9	5.5			
6		*	*	2	7	5	2	2	6	18	8			
7		*	*	1	3	12	3	2	4	5	6			
8		*	*	1	1	15	3	1.5	6	19	7.5			
9		*	*	2	2	19	2	2	8	18	10			
10		*	*	1	1	2	2	2	8	13	10			
11		*	*	1	3	8	3	2	7	18	9			
12		*	*	1	1	7	3	1.5	5.5	12	7			
13		*	*	2	2	4	2	1.5	4.5	13	6			
14		*	*	1	3	14	2	2	2	22	4			
15		*	*	1	3	4	3	1	1	18	2			
16		*	*	2	7	5	3	1.5	2	15	3.5			
17		*	*	1	8	14	2	1	5	15	6			
18		*	*	1	5	16	3	1	6	19	7			
19		*	*	2	2	16	2	1	6	20	7			
20		*	*	1	3	6	3	1	6	2	7			
21		*	*	1	3	19	3	1	7.5	13	8.5			
22		*	*	1	8	14	3	1.5	7	18	8.5			
23		*	*	2	6	15	3	1.5	7	9	8.5			
24		*	*	1	3	18	3	1	7	4	8			
25		*	*	1	1	11	3	1	7	19	8			
26		*	*	2	7	10	3	1	6	3	7			
27		*	*	3	9	12	3	1	2	17	6			
28		*	*	1	7	13	3	1	7	18	8			
29		*	*	1	3	15	3	1	5	18	6			
30		*	*	1	1	16	3	1	4	24	5			
31		*	*	1	3	17	3	1	2	24	3			
32		*	*	1	3	14	3	0.5	2	18	2.5			
33		*	*	1	1	17	3	1.5	1.5	18	6			
34		*	*	1	8	17	3	1.5	6	20	7.5			
35		*	*	1	3	11	3	0.5	6	24	6.5			
36		*	*	2	2	18	3	0.5	4	22	4.5			
37		*	*	1	8	18	3	1.5	2	19	3.5			
38		*	*	1	7	18	3	1.5	2	15	7			
39		*	*	1	8	3	3	1	2	20	6			
40		*	*	1	8	2	3	1	1.5	25	7.5			
41		*	*	2	6	10	3	1	1	18	8			
42		*	*	3	7	3	3	0.5	5	19	5.5			
43		*	*	1	8	3	3	1	1	19	6			
44		*	*	3	9	3	2	1	1	19	6			
45		*	*	1	1	10	3	1.5	3	24	4.5			
46		*	*	1	1	10	3	1.5	3	20	4.5			
47		*	*	2	2	19	2	1.5	7	19	8.5			
48		*	*	2	7	13	2	2	7	22	9			
49		*	*	2	7	9	3	1	6	17	7			
50		*	*	1	8	3	3	1.5	6	20	7.5			
51		*	*	1	7	9	3	1	6	24	7			
52		*	*	1	8	9	3	1.5	6	12	0			
53		*	*	1	3	12	3	2	6	24	0			
54		*	*	1	1	14	3	2	3	19	5			
55		*	*	1	9	15	3	1.5	3	20	4.5			
56		*	*	1	7	13	3	3	3	24	6			
57		*	*	1	3	9	3	1	3	20	4			
58		*	*	2	2	13	3	2	7	12	9			
59		*	*	1	3	11	2	2	7	18	9			
60		*	*	1	8	9	3	1.5	7	20	8.5			
61		*	*	1	3	11	3	1.5	6	24	7.5			
62		*	*	1	5	11	2	1.5	6	20	0			
63		*	*	1	3	9	3	1.5	5	36	6.5			
64		*	*	2	2	15	2	1.5	3	24	4.5			
65		*	*	2	7	8	3	1.5	3	32	4.5			
66		*	*	1	3	8	2	1.5	6	15	7.5			
67		*	*	3	7	9	3	1.5	6	20	7.5			
68		*	*	2	6	11	3	1.5	5	20	6.5			
69		*	*	1	8	17	3	1	5	18	6			
70		*	*	1	3	7	3	1	6	20	0			
71		*	*	1	5	4	3	1	6	20	7			
72		*	*	2	6	5	3	1.5	6	19	7.5			
73		*	*	2	2	9	3	1.5	4	24	5.5			
74		*	*	1	8	9	2	1	6	20	0			
75		*	*	1	8	7	3	1.5	5	20	6.5			

	A	B	C	D	E	F	G	H	I	J	K	L	M	N
75		*	*	1	8	7	3	1.5	5	20	6.5			
76		*	*	2	6	7	2	2	4	18	6			
77		*	*	1	1	5	3	1.5	4	19	5.5			
78		*	*	2	7	8	2	1	4	19	5			
79		*	*	2	2	6	3	1.5	4	12	5.5			
80		*	*	2	6	8	2	1.5	5	18	6.5			
81		*	*	1	8	12	3	2	6	24	0			
82		*	*	3	9	6	2	1.5	5	15	6.5			
83		*	*	1	7	7	2	1.5	5	20	6.5			
84		*	*	1	8	5	3	1	5	19	6			
85		*	*	1	3	4	2	1.5	5	18	13			
86		*	*	1	3	9	3	1	3	18	8			
87		*	*	1	3	9	2	1.5	2	10	7			
88		*	*	2	7	5	2	1	2	12	6			
89		*	*	1	1	6	2	1	4	19	10			
90		*	*	1	7	9	2	1.5	5	17	6.5			
91		*	*	1	3	9	2	1.5	5	19	6.5			
92		*	*	2	6	10	2	1.5	3	18	9			
93		*	*	1	8	17	2	1.5	3	17	4.5			
94		*	*	1	3	10	2	1.5	5	18	13			
95		*	*	2	2	12	1	1.5	5	19	6.5			
96		*	*	3	9	13	3	1.5	7	18	8.5			
97		*	*	3	9	19	2	0.5	2	15	5			
98		*	*	3	8	15	2	1	8	18	9			
99		*	*	2	7	12	2	0.5	5	9	5.5			
100		*	*	1	4	11	2	2	6	18	8			
101		*	*	2	2	10	2	2	6	19	8			
102		*	*	2	2	5	2	2	8	13	0			
103		*	*	1	5	1	2	1.5	4.5	13	6			
104		*	*	1	3	2	2	2	5.5	12	7.5			
105		*	*	1	3	8	3	2	4	5	0			
106		*	*	1	3	4	3	2	8	18	10			
107		*	*	2	6	4	3	1	2	22	6			
108		*	*	1	5	5	2	1	7	18	8			
109		*	*	1	2	7	3	1.5	1	18	10			
110		*	*	1	8	14	3	1.5	7	18	8.5			
111		*	*	1	2	14	3	1.5	6	19	7.5			
112		*	*	1	3	19	3	1	7	15	8			
113		*	*	1	3	18	3	1	6	3	7			
114		*	*	1	1	16	3	1.5	2	9	7			
115		*	*	1	5	16	3	1	7	20	8			
116		*	*	1	4	15	3	1	7.5	4	8.5			
117		*	*	1	8	14	3	1	6	13	7			
118		*	*	1	3	6	3	1.5	6	2	7.5			
119		*	*	3	8	10	3	1	7	19	8			
120		*	*	1	9	11	2	1.5	1.5	15	6			
121		*	*	1	8	12	3	1	5	18	6			
122		*	*	1	3	17	3	1	1.5	18	5			
123		*	*	2	6	17	3	1	1	25	6			
124		*	*	1	3	16	3	1	2	17	6			
125		*	*	1	5	18	3	1.5	4	22	5.5			
126		*	*	1	8	17	3	1.5	2	24	7			
127		*	*	1	2	15	3	1	7	18	0			
128		*	*	1	8	14	3	0.5	4	24	4.5			
129		*	*	1	3	18	3	1.5	2	15	7			
130		*	*	1	3	18	3	1	6	20	7			
131		*	*	1	8	13	3	1	5	18	6			
132		*	*	1	5	11	3	0.5	2	18	0			
133		*	*	1	8	10	3	1	6	24	0			
134		*	*	1	8	10	3	1	1	19	6			
135		*	*	1	8	3	3	1	2	20	6			
136		*	*	2	2	2	3	0.5	2	19	10			
137		*	*	1	5	3	3	0.5	5	19	5.5			
138		*	*	2	7	3	3	1.5	7	19	8.5			
139		*	*	2	6	3	3	1	3	19	0			
140		*	*	1	7	19	3	1.5	6	17	7.5			
141		*	*	1	3	14	2	1.5	3	24	4.5			
142		*	*	3	9	13	2	1	1	20	6			
143		*	*	3	7	3	2	2	3	20	5			
144		*	*	1	8	9	3	1	7	22	8			
145		*	*	1	3	10	3	1.5	6	20	7.5			
146		*	*	2	7	9	3	2	3	20	5			
147		*	*	1	5	9	3	1.5	3	24	4.5			
148		*	*	1	7	9	3	1	3	20	4			
149		*	*	1	3	15	3	2	6	12	8			
150		*	*	1	3	13	3	3	6	24	9			
151		*	*	1	2	13	3	2	7	12	9			
152		*	*	1	5	12	3	1.5	6	24	7.5			
153		*	*	1	3	11	3	1.5	6	24	7.5			
154		*	*	2	6	8	3	1.5	5	36	6.5			
155		*	*	2	2	9	2	2	7	18	9			
156		*	*	1	8	9	3	1.5	7	20	8.5			
157		*	*	2	6	11	3	1.5	3	24	4.5			
158		*	*	2	2	17	3	1.5	5	20	6.5			
159		*	*	1	9	15	2	1.5	3	32	4.5			
160		*	*	1	5	11	2	1.5	6	20	7.5			
161		*	*	1	8	11	3	1	4	24	5			
162		*	*	2	6	9	3	1.5	6	20	7.5			
163		*	*	1	3	8	2	1.5	6	15	7.5			

	A	B	C	D	E	F	G	H	I	J	K	L	M	N
163		*	*	1	3	8	2	1.5	6	15	7.5			
164		*	*	1	8	4	3	1	5	18	6			
165		*	*	2	7	5	3	1.5	6	20	7.5			
166		*	*	1	5	5	3	1.5	4	18	11			
167		*	*	1	3	7	3	1	6	20	7			
168		*	*	1	3	7	2	1	6	20	7			
169		*	*	2	2	9	3	1.5	4	20	5.5			
170		*	*	1	8	9	3	1.5	6	20	7.5			
171		*	*	2	2	8	2	1	5	20	6			
172		*	*	1	5	7	2	2	4	19	12			
173		*	*	1	3	5	3	1	2	12	6			
174		*	*	2	2	6	3	1.5	6	24	7.5			
175		*	*	1	5	6	2	1.5	4	12	5.5			
176		*	*	1	5	7	2	1.5	2	10	7			
177		*	*	1	3	12	3	2	5	15	0			
178		*	*	2	2	9	3	1	3	20	8			
179		*	*	2	7	9	2	1.5	5	20	6.5			
180		*	*	1	5	9	2	1	5	19	6			
181		*	*	1	3	17	2	1.5	3	19	4.5			
182		*	*	1	8	9	2	1.5	5	20	6.5			
183		*	*	2	6	8	2	1.5	5	18	6.5			
184		*	*	3	9	6	2	1.5	5	19	6.5			
185		*	*	1	6	13	3	1.5	7	33	6.5			
186		*	*	1	3	12	1	1.5	5	19	0			
187		*	*	2	2	10	2	1.5	3	18	4.5			
188		*	*	1	6	10	2	1.5	5	18	6.5			
189		*	*	1	5	15	2	2	6	18	8			
190		*	*	2	2	12	2	0.5	5	9	0			
191		*	*	1	8	11	2	1	8	18	9			
192		*	*	1	3	19	2	2	6	19	8			
193		*	*	1	8	10	2	0.5	2	15	5			
194		*	*	2	7	5	2	1	4	20	5			
195		*	*	1	8	4	2	1.5	5	20	6.5			
196		*	*	1	3	1	2	2	8	13	10			
197		*	*	1	6	2	2	2	5.5	12	7.5			
198		*	*	1	6	4	3	2	2	22	8			
199		*	*	2	6	5	2	1.5	4.5	13	6			
200		*	*	1	8	7	3	1.5	8	18	9.5			
201		*	*	2	2	16	3	2	4	9	6			
202		*	*	2	6	14	3	1.5	1	18	5			
203		*	*	1	3	14	3	1.5	6	19	7.5			
204		*	*	1	5	8	3	1.5	2	5	7			
205		*	*	1	5	19	3	1	7	15	8			
206		*	*	2	2	16	3	1	6	20	7			
207		*	*	1	5	6	3	1	6	2	7			
208		*	*	1	7	4	3	1	7	18	8			
209		*	*	1	3	5	2	1	7	18	8			
210		*	*	2	6	11	2	1	7	15	8			
211		*	*	1	8	14	3	1	7.5	13	8.5			
212		*	*	1	7	18	3	1.5	6	3	7.5			
213		*	*	1	3	17	3	1	1	18	0			
214		*	*	1	5	16	3	1	2	17	3			
215		*	*	2	7	15	3	0.5	4	4	4.5			
216		*	*	1	3	15	3	1	7	18	8			
217		*	*	2	6	12	3	1	7	18	8			
218		*	*	2	7	10	3	1	1.5	19	0			
219		*	*	1	8	13	3	1	7	18	8			
220		*	*	2	6	14	3	1	5	24	6			
221		*	*	1	3	17	3	1.5	1.5	25	6			
222		*	*	2	6	17	3	1.5	2	24	7			
223		*	*	2	7	11	3	0.5	2	18	0			
224		*	*	2	6	2	3	0.5	2	19	0			
225		*	*	1	5	18	3	1.5	4	22	5.5			
226		*	*	1	8	18	3	1.5	2	15	7			
227		*	*	2	6	3	3	1	2	20	9			
228		*	*	1	8	3	3	0.5	5	19	5.5			
229		*	*	1	3	10	3	1	6	24	7			
230		*	*	1	7	10	3	1	1	19	0			
231		*	*	1	3	18	3	1	6	20	7			
232		*	*	1	8	3	3	1.5	7	19	8.5			
233		*	*	1	5	19	3	1.5	6	17	7.5			
234		*	*	2	7	3	3	1	3	19	0			
235		*	*	1	8	10	3	1.5	6	20	7.5			
236		*	*	1	3	13	2	1	1	19	8			
237		*	*	1	3	9	3	1	7	22	8			
238		*	*	1	5	3	2	2	3	20	5			
239		*	*	2	6	9	3	2	3	20	5			
240		*	*	1	8	12	3	1.5	6	24	7.5			
241		*	*	2	7	15	3	2	6	12	8			
242		*	*	1	8	14	2	1	3	24	0			
243		*	*	2	6	9	3	1.5	3	24	4.5			
244		*	*	1	3	9	3	1.5	3	20	4.5			
245		*	*	1	6	13	3	1.5	6	24	7.5			
246		*	*	1	8	13	3	1.5	6	12	7.5			
247		*	*	1	7	11	3	2	7	24	9			

	A	B	C	D	E	F	G	H	I	J	K	L	M	N
246		*	*	1	8	13	3	1.5	6	12	7.5			
247		*	*	1	7	11	3	2	7	24	9			
248		*	*	1	5	8	3	2	7	36	9			
249		*	*	1	8	9	2	1.5	5	18	6.5			
250		*	*	1	5	9	3	1.5	7	20	8.5			
251		*	*	1	4	11	3	1.5	3	24	4.5			
252		*	*	1	8	11	2	1.5	6	20	7.5			
253		*	*	1	3	15	2	1.5	3	32	4.5			
254		*	*	1	8	8	2	1.5	6	15	7.5			
255		*	*	1	5	17	3	1.5	5	20	6.5			
256		*	*	1	8	9	3	1.5	6	20	7.5			
257		*	*	1	3	13	3	1	4	24	10			
258		*	*	1	8	7	3	1	6	20	7			
259		*	*	1	8	4	3	1	5	18	6			
260		*	*	1	5	5	3	1	6	20	7			
261		*	*	2	6	5	3	1.5	6	18	7.5			
262		*	*	1	7	7	2	1.5	4	19	5.5			
263		*	*	1	5	9	3	1.5	4	19	5.5			
264		*	*	1	8	7	2	2	4	19	6			
265		*	*	1	7	9	3	1.5	6	20	7.5			
266		*	*	1	8	8	2	1	5	20	6			
267		*	*	1	7	6	3	1.5	6	24	7.5			
268		*	*	1	5	8	2	1.5	5	18	6.5			
269		*	*	2	6	12	3	1.5	4	15	11			
270		*	*	1	8	6	2	1.5	2	12	7			
271		*	*	2	7	7	2	2	5	10	7			
272		*	*	2	6	5	3	1	2	12	0			
273		*	*	2	4	4	2	1.5	5	20	6.5			
274		*	*	1	8	9	3	1	3	18	4			
275		*	*	2	7	9	2	1.5	5	19	6.5			
276		*	*	1	8	9	2	1.5	5	18	6.5			
277		*	*	2	7	6	2	1.5	5	17	0			
278		*	*	2	6	5	2	1.5	3	19	9			
279		*	*	2	6	9	2	1.5	3	19	4.5			
280		*	*	3	7	17	2	1	5	18	6			
281		*	*	2	4	12	2	1	4	17	5			
282		*	*	1	5	10	2	1.5	5	18	6.5			
283		*	*	2	7	13	3	1.5	5	19	6.5			
284														
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	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O
1	GROUP 2 2018	Name	Sex	SEstatus	Diagnosis heads	TIMINTERVAL applic-procure	NUMDEPT	NUMSESSIONS mse/ ideas	NUMSESSIONS scales	TIMINTERCG DAYS					
2		*	*	1	9	2	2	2.5	0	6	2.5				
3		*	*	1	3	2	2	2	0	6	2				
4		*	*	1	5	1	2	1	0	6	1				
5		*	*	1	3	1	2	1.5	0	8	1.5				
6		*	*	1	3	1	2	1	0	9	1				
7		*	*	3	4	2	2	1	0	6	1				
8		*	*	1	5	1	1	1	0	3	1				
9		*	*	1	3	2	2	2.5	0	5	5				
10		*	*	1	3	2	1	1.5	0	18	1.5				
11		*	*	2	8	1	2	2	0	12	2				
12		*	*	1	6	1	2	2	0	15	0				
13		*	*	1	3	1	2	1	0	18	1				
14		*	*	1	3	1	2	1	0	12	3				
15		*	*	2	4	2	2	1.5	0	15	3				
16		*	*	1	5	1	1	1	0	11	1				
17		*	*	1	3	1	2	1	0	11	2				
18		*	*	1	3	1	1	1.5	0	14	3				
19		*	*	1	1	2	1	0.5	0	14	0.5				
20		*	*	1	3	2	1	1	0	13	1				
21		*	*	2	8	2	2	0.5	0	15	3				
22		*	*	1	3	2	2	1	0	12	1				
23		*	*	3	4	2	2	1.5	0	11	1.5				
24		*	*	1	7	2	1	1.5	0	10	3				
25		*	*	2	8	4	2	1.5	0	11	1.5				
26		*	*	1	2	2	1	1	0	12	1				
27		*	*	1	5	2	2	1	0	18	1				
28		*	*	1	2	2	1	1	0	14	0				
29		*	*	1	6	2	2	1	0	8	1				
30		*	*	1	7	1	1	1.5	0	18	3				
31		*	*	2	8	2	2	0.5	0	14	1.5				
32		*	*	1	1	1	1	1.5	0	12	1.5				
33		*	*	1	3	1	1	1.5	0	10	1.5				
34		*	*	3	8	2	2	0.5	0	12	0.5				
35		*	*	1	3	1	2	0.5	0	12	0.5				
36		*	*	3	8	1	1	2.5	0	15	2.5				
37		*	*	2	8	1	1	1	0	15	1				
38		*	*	2	7	1	2	1	0	11	0				
39		*	*	1	9	2	1	1.5	0	10	1.5				
40		*	*	1	7	2	2	1.5	0	10	3				
41		*	*	1	2	1	1	0.5	0	12	1.5				
42		*	*	1	2	3	2	1	0	6	1				
43		*	*	1	1	1	1	1.5	0	8	1.5				
44		*	*	1	7	1	1	1.5	0	25	1.5				
45		*	*	1	5	2	1	1.5	0	15	1.5				
46		*	*	1	8	1	1	1	0	15	1				
47		*	*	3	7	1	1	1	0	4	1				
48		*	*	1	3	1	1	1	0	6	0				
49		*	*	1	1	1	1	2.5	0	5	2.5				
50		*	*	1	2	1	2	1	0	6	1				
51		*	*	1	2	1	2	2	0	6	2				
52		*	*	1	2	1	2	2	0	25	2				
53		*	*	1	7	5	1	1	0	15	1				
54		*	*	1	1	3	1	2	0	15	2				
55		*	*	1	3	1	1	2	0	10	2				
56		*	*	2	4	1	1	3	0	10	3				
57		*	*	2	7	5	1	2	0	9	2				
58		*	*	1	1	1	2	1.5	0	9	4.5				
59		*	*	1	3	1	2	1	0	4	2				
60		*	*	3	8	1	1	1.5	0	6	1.5				
61		*	*	1	5	1	1	1.5	0	6	1.5				
62		*	*	1	2	5	2	1	0	9	2				
63		*	*	1	3	4	1	1.5	0	9	1.5				
64		*	*	1	2	1	1	1.5	0	10	1.5				
65		*	*	1	8	1	1	1.5	0	10	1.5				
66		*	*	1	3	1	1	1.5	0	11	1.5				
67		*	*	2	7	1	1	1.5	0	10	1.5				
68		*	*	1	7	1	1	1	0	6	2				
69		*	*	1	3	1	1	1	0	5	2				
70		*	*	2	7	1	1	1.5	0	10	1.5				
71		*	*	1	3	1	2	1.5	0	12	1.5				
72		*	*	1	3	1	1	1	0	11	3				
73		*	*	3	4	1	1	1.5	0	11	1.5				

	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O
72		*	*	1	3	1	1	1	0	11	3				
73		*	*	3	4	1	1	1.5	0	11	1.5				
74		*	*	1	5	1	1	2	0	5	2				
75		*	*	1	7	1	1	1.5	0	5	1.5				
76		*	*	1	3	1	1	1	0	10	2				
77		*	*	1	7	1	1	1.5	0	2	3				
78		*	*	1	2	1	1	1.5	0	3	3				
79		*	*	1	3	5	1	2	0	10	6				
80		*	*	2	8	1	1	1.5	0	12	1.5				
81		*	*	1	3	1	1	1.5	0	10	3				
82		*	*	1	9	1	1	1	0	10	2				
83		*	*	1	3	1	1	2	0	10	3				
84		*	*	3	7	1	1	1	0	9	1				
85		*	*	1	3	1	1	1.5	0	5	1.5				
86		*	*	2	7	1	1	1	0	5	4				
87		*	*	1	3	4	1	1	0	5	3				
88		*	*	1	7	1	1	0.5	0	9	1.5				
89		*	*	2	8	1	1	0.5	0	12	3				
90		*	*	3	8	1	1	3	0	9	3				
91		*	*	2	4	2	2	2.5	0	6	5				
92		*	*	1	2	1	2	1	0	6	2				
93		*	*	1	3	1	2	1.5	0	3	0				
94		*	*	1	6	1	2	1	0	6	2				
95		*	*	1	9	1	1	1	0	18	2				
96		*	*	1	6	2	2	2	0	5	4				
97		*	*	1	3	1	2	2	0	6	2				
98		*	*	1	8	1	2	2	0	8	2				
99		*	*	2	7	1	2	1	0	9	1				
100		*	*	1	9	2	2	1	0	18	1				
101		*	*	2	8	2	2	2.5	0	15	2.5				
102		*	*	1	2	2	1	1.5	0	11	1.5				
103		*	*	1	3	1	2	1	0	11	1				
104		*	*	1	6	2	2	1.5	0	12	3				
105		*	*	1	5	1	1	1	0	12	1				
106		*	*	3	8	1	2	1	0	12	1				
107		*	*	1	3	1	1	1.5	0	15	3				
108		*	*	1	5	2	1	0.5	0	13	0.5				
109		*	*	2	7	2	1	1	0	14	1				
110		*	*	3	4	2	2	0.5	0	15	0.5				
111		*	*	1	8	2	2	1	0	14	1				
112		*	*	1	3	2	2	1.5	0	12	1.5				
113		*	*	1	9	2	1	1.5	0	11	1.5				
114		*	*	1	2	2	1	1	0	10	1				
115		*	*	1	2	4	2	1.5	0	11	4.5				
116		*	*	2	7	1	1	1.5	0	12	1.5				
117		*	*	1	3	1	1	1.5	0	18	1.5				
118		*	*	2	8	3	1	2	0	6	4				
119		*	*	1	6	5	1	2	0	3	2				
120		*	*	1	3	1	1	1.5	0	2	1.5				
121		*	*	1	8	1	1	1.5	0	4	3				
122		*	*	1	2	1	1	1.5	0	5	1.5				
123		*	*	2	7	5	2	1	0	5	2				
124		*	*	1	8	4	1	1.5	0	10	0				
125		*	*	1	6	1	1	1.5	0	10	3				
126		*	*	2	4	1	1	1.5	0	6	3				
127		*	*	1	3	1	1	1	0	10	1				
128		*	*	1	3	1	1	1	0	11	2				
129		*	*	2	7	1	1	1.5	0	12	1.5				
130		*	*	1	2	1	2	1.5	0	11	0				
131		*	*	1	3	1	1	1	0	10	2				
132		*	*	1	2	1	1	1.5	0	10	1.5				
133		*	*	1	6	1	1	2	0	5	2				
134		*	*	1	5	1	1	1.5	0	10	1.5				
135		*	*	2	7	1	1	1	0	5	2				
136		*	*	1	3	5	1	2	0	12	4				
137		*	*	3	7	1	1	1.5	0	11	3				
138		*	*	1	1	1	1	1.5	0	2	1.5				
139		*	*	2	8	1	1	1.5	0	3	1.5				
140		*	*	1	2	1	1	1.5	0	10	3				
141		*	*	3	7	1	1	1	0	10	1				
142		*	*	1	6	1	1	2	0	5	2				
143		*	*	1	3	1	1	1	0	5	1				
144		*	*	1	2	4	1	1	0	9	2				

	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O
144		*	*	1	2	4	1	1	0	9	2				
145		*	*	2	8	1	1	1.5	0	10	1.5				
146		*	*	2	7	1	1	1	0	5	2				
147		*	*	3	7	1	1	0.5	0	9	0.5				
148		*	*	1	2	1	1	0.5	0	12	0.5				
149		*	*	1	6	1	1	3	0	9	6				
150		*	*	2	7	1	1	1.5	0	5	3				
151		*	*	1	3	1	1	2.5	0	6	5				
152		*	*	2	4	1	2	1	0	12	1				
153		*	*	1	2	1	2	2	0	8	2				
154		*	*	1	2	1	2	2	0	10	4				
155		*	*	1	6	1	1	2	0	8	2				
156		*	*	1	2	1	1	3	0	9	3				
157		*	*	1	3	1	2	1.5	0	9	3				
158		*	*	1	2	1	2	1	0	9	1				
159		*	*	2	7	3	1	2	0	2	2				
160		*	*	3	8	5	1	1	0	10	1				
161		*	*	2	7	5	1	2	0	9	2				
162		*	*	1	8	1	1	1.5	0	6	1.5				
163		*	*	1	3	1	1	1.5	0	3	1.5				
164		*	*	1	2	1	1	1.5	0	4	1.5				
165		*	*	1	8	1	1	1.5	0	5	4.5				
166		*	*	1	8	5	2	1	0	5	1				
167		*	*	1	3	4	1	1.5	0	10	3				
168		*	*	1	2	1	1	1.5	0	10	1.5				
169		*	*	1	8	1	1	1.5	0	6	3				
170		*	*	1	3	1	1	1	0	11	1				
171		*	*	2	7	1	1	1	0	10	1				
172		*	*	1	3	1	1	1.5	0	12	3				
173		*	*	1	2	1	2	1.5	0	11	1.5				
174		*	*	1	3	1	1	1	0	10	2				
175		*	*	2	8	1	1	1.5	0	10	1.5				
176		*	*	1	3	1	1	2	0	10	4				
177		*	*	1	3	5	1	2	0	12	2				
178		*	*	3	4	1	1	1.5	0	5	1.5				
179		*	*	1	2	1	1	1	0	5	2				
180		*	*	1	3	1	1	1.5	0	11	3				
181		*	*	1	2	1	1	1.5	0	10	1.5				
182		*	*	1	5	1	1	1.5	0	2	1.5				
183		*	*	1	2	1	1	1.5	0	3	3				
184		*	*	1	2	1	1	1	0	3	1				
185		*	*	1	3	1	1	2	0	5	4				
186		*	*	1	1	1	1	1	0	11	1				
187		*	*	1	3	1	1	1.5	0	10	3				
188		*	*	3	8	1	1	1	0	10	1				
189		*	*	1	3	1	1	0.5	0	9	0.5				
190		*	*	2	7	1	1	0.5	0	9	0.5				
191		*	*	2	7	1	1	3	0	18	3				
192		*	*	1	8	4	1	1	0	15	1				
193		*	*	1	3	2	2	2.5	0	6	2.5				
194		*	*	2	8	1	2	1	0	8	1.5				
195		*	*	2	8	1	2	1.5	0	9	0				
196		*	*	1	3	2	2	2	0	9	2				
197		*	*	1	2	2	2	1	0	11	1.5				
198		*	*	3	4	2	2	2.5	0	12	2.5				
199		*	*	1	3	1	2	1	0	5	0				
200		*	*	1	2	1	1	1	0	6	2				
201		*	*	1	5	1	2	2	0	6	4				

	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O
201		*	*	1	5	1	2	2	0	6	4				
202		*	*	1	2	2	1	1.5	0	6	3				
203		*	*	1	3	1	2	2	0	12	2				
204		*	*	1	1	1	2	1	0	5	2				
205		*	*	1	2	2	2	1.5	0	5	0				
206		*	*	1	3	1	2	1	0	11	3				
207		*	*	2	7	1	1	1	0	18	1				
208		*	*	1	3	1	2	1	0	18	2				
209		*	*	1	6	2	1	0.5	0	15	1				
210		*	*	1	2	2	1	1	0	15	0				
211		*	*	1	2	2	2	0.5	0	13	0				
212		*	*	3	4	1	1	1.5	0	12	1.5				
213		*	*	1	3	4	2	1.5	0	14	0				
214		*	*	2	7	2	2	1	0	14	1				
215		*	*	1	5	2	2	1.5	0	12	0				
216		*	*	1	1	2	1	1.5	0	12	1.5				
217		*	*	1	5	2	1	1	0	11	2				
218		*	*	2	8	2	2	1	0	10	2				
219		*	*	3	8	2	1	1	0	14	2				
220		*	*	1	2	2	2	1	0	8	0				
221		*	*	1	1	1	1	1.5	0	18	3				
222		*	*	1	2	1	1	1.5	0	12	1.5				
223		*	*	1	6	1	1	1.5	0	10	0				
224		*	*	1	8	2	2	0.5	0	14	2				
225		*	*	1	2	2	2	0.5	0	12	1				
226		*	*	2	7	1	2	0.5	0	12	1				
227		*	*	1	1	1	1	2.5	0	2	0				
228		*	*	1	8	2	1	1.5	0	3	1.5				
229		*	*	2	4	2	2	1.5	0	4	0				
230		*	*	1	3	1	1	1	0	15	2				
231		*	*	1	3	1	2	1	0	15	0				
232		*	*	1	2	1	1	0.5	0	12	2				
233		*	*	1	2	3	2	1	0	8	1				
234		*	*	3	7	1	1	1.5	0	8	1.5				
235		*	*	1	8	1	1	1.5	0	8	1.5				
236		*	*	2	8	1	1	1	0	12	1				
237		*	*	3	8	1	1	1	0	11	1				
238		*	*	1	3	1	1	1	0	10	3				
239		*	*	2	7	1	1	1.5	0	10	3				
240		*	*	1	6	2	1	1.5	0	5	3				
241		*	*	3	8	1	1	1.5	0	10	1.5				
242		*	*	1	9	2	2	1	0	18	2				
243		*	*	1	5	2	1	1	0	14	1				
244		*	*	1	1	2	2	1	0	8	2				
245		*	*	3	7	2	2	0.5	0	14	0.5				
246		*	*	1	8	2	2	0.5	0	10	0.5				
247		*	*	1	3	1	2	0.5	0	11	1				
248		*	*	1	2	1	1	2.5	0	15	2.5				
249		*	*	2	8	2	1	1.5	0	15	1.5				
250		*	*	1	3	1	1	1	0	12	1				
251		*	*	2	7	1	2	1	0	6	1				
252		*	*	1	9	2	2	1.5	0	10	1.5				
253		*	*	1	3	1	1	0.5	0	12	0.5				
254		*	*	1	6	3	2	1	0	12	2				
255		*	*	1	1	1	1	1.5	0	8	0				
256		*	*	2	7	1	1	1.5	0	25	3				
257		*	*	1	6	1	1	1	0	15	1				
258		*	*	1	3	2	1	1.5	0	15	1.5				
259		*	*	1	3	1	1	1	0	4	2				
260		*	*	2	4	1	1	1	0	6	2				
261		*	*	1	8	1	1	1.5	0	5	1.5				
262		*	*	3	7	1	1	2.5	0	6	2.5				
263		*	*	1	2	1	2	1	0	8	3				
264		*	*	1	6	1	2	2	0	12	2				
265		*	*	1	5	1	2	2	0	10	2				
266		*	*	1	5	1	1	2	0	8	2				
267		*	*	3	8	1	1	3	0	9	3				
268		*	*	1	3	5	1	1	0	9	2				
269		*	*	1	6	1	2	1.5	0	10	1.5				
270		*	*	1	6	1	2	1	0	9	2				
271		*	*	3	8	1	1	1.5	0	9	0				
272															
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A deconstruction of germane advantages of the new Indian model of psychiatric disability certification

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ABSTRACT:

Background: Guidelines for psychiatric disability certification in India have evolved over years, with modifications intended to effectively simplify and perfect the process by improving the protocols every time, ultimately directed at the welfare of the disabled.

Aim: To assess of changes in the census pattern, frequency of diagnoses, liaisons and duration pattern of disability certification for specific psychiatric conditions, between the two groups of patients from the years 2017 and 2018 respectively, over a period of rapidly changing certification guidelines, in this tertiary care hospital.

Methods and Materials: It is an observational study with continuous sampling with all the patients attending disability certification clinic, about 281 and 270 in the two years, started after obtaining appropriate institutional ethical committee clearance and due informed consent from the participants. Materials included sociodemographic and clinical profile including diagnosis frequency of disability certificates issued, time taken for assessment, certification and interdepartmental referrals, and the caregiver-days

spent for the process, from the Outpatient unit of Department of Psychiatry. Diagnostic tool used was ICD10 DCR, and severity assessment tools used were BKT and VSMS for Intellectual disability, CARS and ISAA for Autism disorders, and IDEAS for other psychiatric illnesses.

Statistical methods: Appropriate statistical analysis using chi squared tests for frequencies and t-tests for difference between means were done.

Results: Low and high income group apparently benefitted more from the new changes in guidelines. The time spent per certification and the number of certificates issued have come down significantly after redistribution to legally privileged allied departments.

Conclusion: New guidelines appear to help the needy, considerably lessen the burden of psychiatric professionals, and it turned more beneficial by sparing more *azurite* minutes for the management of the mentally ill clients.

Keywords: Disability certification, Mental illness, Intellectual disability, Facial disfigurement, Motor neuron disease, Sickle cell disease

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INTRODUCTION:

Disability has been explained as a dynamic interaction between a person with a specific health condition and an insufficient or exacting environmental context, with a resultant relative difficulty in expressing and maximizing his or her wholesome functional efficiency.[1,2] A staggering 28% of all of DALYs result from neuro-psychiatric conditions,

according to the Global burden of disease study by WHO.[3] In India, disability certification is a constitutionally driven process,[4] backed by the Rights of Persons with Disabilities Act, 2016 (RPwD Act).[5] It is an essential legal document based on which a National Identity Card is issued,[6] which in turn determines the eligibility for welfare schemes,[7,8] legal compensations, inheritance of pension and properties,[9,10,11] apart from academic[12,13] and travel concessions.[14] Guidelines for disability certification notifying norms for assessment and quantification,[15] have been evolved over years, progressively fine-tuning logistics and protocols.[16] On 5th January 2018, a new set of guidelines for the issue of disability certificate was notified in the Gazette of India.[17]

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Review of previous guidelines:

Mental Illness (MI) was included for certification, through February 2002 guidelines,[18] and Autism Spectrum Disorder (ASD) and Specific Learning Disabilities (SLD) through 2016 guidelines,[19,20] years after the PWD Act, 1998[21] and RPwD Act, 2016[5] respectively. With scarcer clinical psychologists, psychiatrists who were also authorized[15,22,23] to do Intelligence Quotient (IQ) tests, were overburdened many a time. Minimum percentage for disability benefits was 70% for MI[24] in few states, amended recently to 40% following RPwD Act 2016.[25,26]

Changes in current guidelines:

Developmental entities like ASD, SLD, Speech and language disability (SALD) and Cerebral palsy (CP) have been comprehensively included (for the first time). Many of the newly categorized heads, previously certified as a single disability, may now qualify for an MD certificate, and hence a higher score.

Autism can now be scored with the Indian Scale for the Assessment of Autism spectrum disorders (ISAA) as early as 3 years of age,[27] better than the 6 years minimum prescribed by the Guidelines notification on Autism (2016)[19] but yet within the range of 3 to 8 years of age.

Intellectual disability (ID) may need yearly reassessment and re-certification for claiming disability concessions in few State board examinations (like Tamil Nadu), and five yearly assessments for Central Board, accommodating for new changes in the student's disability profile to update the privileges he or she ought to be granted in the examinations.

Certifying authority: Though left behind in the certification of SLD, a few states like Tamil Nadu[28] do consider the psychiatrist. Similarly not including a neurologist or a psychiatrist could make diagnosing SALD and differentiating it from psychogenic or pathoplastic entities if any, difficult.

Rating scales, protocols and assessor:

i. Only the Indian Disability Evaluation and Assessment Scale (IDEAS)[29] for MI is to be scored by the psychiatrist. Clinical psychologists to assess ID and neurodevelopmental conditions shall be made available in the allied departments of Physical and Medical Rehabilitation (PMR) and Paediatrics, as per MCI regulations (August 2017), apart from the District Early Intervention Centre.

ii. Not unanimously, BKT and WISC-III are now the preferred tests for diagnosing ID and SLD respectively. However, scoring with adaptive

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functioning assessment with VSMS, is easier with a reliable caregiver.[30] Table 5 shows evolution of ID methods over the past four decades.[31] Now Social Quotient as high as 84 is certifiable as disability (borderline).

iii. Those with features of SLD, and an IQ of 70-85 unfortunately are ineligible for an SLD certificate. Now the prescribed tool for SLD is National Institute for Mental Health and Neurosciences (NIMHANS) battery,[17] and for ASD is ISAA, instead of western scales.

iv. In these guidelines, apraxia of speech, dysarthria (including those from motor cortical lesions) and aphasia, have been brought under SALD; and quite unusually, dyspraxia and developmental aphasia have been included under the rubrics of SLD. But, ICD11[32] considers developmental Speech or language disorders under Psychiatry section 6A01, and they include disorders of functional speech articulation (dysarthria excluded), fluency, and developmental dysphasia or aphasia of receptive, expressive and pragmatic types (acquired aphasia with epilepsy excluded). Organization of individual disabilities under heads appropriating to ICD11 could bring a better clarity.

v. Mental illness (as secondary psychiatric complications) due to Chronic neurological conditions (CNC) "such as" Parkinson's disease and multiple sclerosis can now be certified by the psychiatrist, scoring with IDEAS or “any” standardized IQ test, as needed.

Some suggestions for forthcoming version of guidelines:

Motor neuron diseases (MND) including amyotrophic lateral sclerosis (ALS), and

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spinobulbar muscular atrophy, in advanced stages cause emotional disturbances, cognitive and behavioral changes, in addition to the severe physical impairment, and should be made certifiable by the psychiatrist. Though upper and lower 'motor neurone lesions' have been mentioned under the head 'LD due to CNC,' a clear mention of these neurodegenerative conditions is desirable, to be effective. Few states like Rajasthan, and the Department of Income Tax (Section 80DDB) recognize it as a terminal illness producing significant disability.[33]

While cranial nerve disability, post-head injury fits and epileptic convulsions have been removed this time around, stroke, sensory deficits, neurogenic bladder disability, and sensory and cerebellar ataxia continue to be under the head, 'LD due to CNC' (Section E, Chapter I).[17,3] Those with psychiatric complications secondary to these conditions may miss out on the possibility of a rightful additional disability score, as a separate psychiatric weightage has not been allowed for, as in the head 'MI due to CNC' (Chapter VI).

As disfigurement especially of face, is literally privation of one's beauty. It permanently incarcerates mind as well, and reduces one's job and hence, financial prospects. Considering the resulting psychiatric morbidity in the disability calculation under a single head namely 'Facial disfigurement' similar to the one in the 1981 guideline, would benefit those with facial disfigurement, either acid or injury-related, assaulted or accidental.

Similar to sensory and cerebellar ataxia, chronic conditions with incoordination, dystonia and dyskinesia also severely disrupt functional adaptation. Just as ICD11[32]

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considers in the Psychiatry section 6A04, a Developmental motor coordination disorder (of functional cerebellar and extrapyramidal dysfunction, in excess of any neurological attribution), it needs to be counted as a disability.

Under the head 'Sickle cell disease' (SCD), disability from neuropsychiatric complications like impaired cognitive function with deficits in attention, executive function and language, and abnormal thought content need to be scored.

The authors suggest that the secondary intellectual impairment and cognitive deficits from CNC and other medical conditions (SCD included) can be assessed better with Lobar function and/or Neuropsychological tests. Murali et al also suggest similar refinements.[3]

Regarding benefits, it would be beneficial to have MI, ASD, SALD and SLD added to the list of disabling disorders given concession for travel in Indian Railways.

This study is to document changes in trends of certification in 2017 and 2018 in this tertiary hospital in South India which caters to the needs of neuropsychiatric patients of about five districts.

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AIM AND OBJECTIVES:

The aim of the study is to assess the pattern of disability certification in 2017 and 2018, including the frequency of diagnoses given, liaising referrals and the time taken for certification. Comparison of change in the patern between the two years, and factors contributing to the changes, including the types of tools used and assessment duration, was made.

METHODS AND MATERIALS:

Methodology:

It was a cross-sectional, observational study, using continuous sampling technique, with all the consenting patients attending the outpatient department (OPD) in the Department of Psychiatry in this tertiary care hospital, for the purpose of disability certification, over the two-year study period from January 2017 to December 2018. Clearance at the institutional committee for human ethics was obtained before the start of the study. After written informed consents were taken, about 281 patients from 2017 and 270 patients from 2018, as two groups respectively, were compared between them.

Inclusion and exclusion criteria:

Inclusion criteria were those who have applied for a disability certificate from the Department of Psychiatry, and consented along with their caregiver for the study.

Exclusion criteria included those who were found not eligible for any psychiatric disability certificate, and those with CNC without psychiatric complications, epilepsy without psychotic features, and acquired aphasia with epilepsy (Landau-Kleffner syndrome).

Materials:

A semi-structured sociodemographic and clinical profile on the patients including their age, sex, place of residence, socioeconomic status was collected.

Clinical profile data collected included diagnosis-specific severity assessment scores, time consumed for each assessment, certification-related referrals to allied/liaising

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departments, and for issue of certificate, and frequency of each disability diagnoses in the issued certificates. The caregiver-days spent for the process, was calculated as a product of number of attenders accompanying each patient and number of days they accompanied.

International Classification of Diseases (ICD10), 10th Edition, Diagnostic Criteria for Research (DCR),[34] was used for the diagnoses of specific psychiatric conditions.

Binet-Kamat Test, BKT, is an Indian adaptation of the common verbal IQ test, the Stanford—Binet Test,[35] used for the age group of 3 to 22 years. It assesses seven primary domains, viz., language, memory, reasoning, numerical reasoning, conceptual thinking, visuomotor coordination and social intelligence. The adaptations in various Indian languages are widely used in clinical and research settings.

Vineland Social Maturity Scale, VSMS[36] is a semistructured interview format scale with 117 questions, in eight social areas, for up to 15 years of age. It measures social maturity (adaptability), intelligence and competency.

Indian Scale for Assessment of Autism, ISAA, scores with a five-point scale based on symptom frequency. It has been standardized and includes observation, parental interview, and testing typical characteristics[37] with home-based materials. It computes disability for certification based on total scoring.[27]

Childhood Autism Rating Scale, CARS (Schopler et al. 1980, 1988), is a test for assessing the presence and severity of symptoms of autism spectrum disorders.[38,39] The CARS has a scale of 15 items to be observed and discussed with the primary care-giver, and therapists, teachers, child care providers, if available.

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Indian Disability Evaluation and Assessment Scale, 2002 (IDEAS), developed by the Rehabilitation Committee of Indian Psychiatric Society in 2000. It assesses disability under four domains: Self care, interpersonal activities (social relationships), communication and understanding, and work. Each domain and a Duration of Illness item (DoI) scored from 0 to 4, when added gives a global score out of 20, as the level of disability due to mental illness.[29]

Statistical methods:

Statistical analysis was done through MS Excel, using descriptive statistics, Student's t for means and chi-squared tests for frequency data, and P values to determine the statistical significance of differences between the data from the past two years, were found out.

RESULTS:

Though there had been a gradual increase of certificates by other departments from two to 22 over the previous five years, the number has swollen to 92 in 2018, which was statistically significant. Specific learning disorder drew a blank as psychiatrists had been omitted from the authority to certify it. As the burden of administering IQ test has been completely shifted over to the clinical psychologist, of late both the paediatricians and physicians had referred more clients directly to the former, and themselves using the results. Apparently, many cases of organic psychosis could now be more appropriately certified under the head of CNC with (secondary) mental illness.

More clients from both low (189 vs 195) and high (13 vs 27) economic groups had availed the benefits of certification in the second year group, about 7.4% and 116%

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respectively. Mean time interval from the application and procurement of certificate has decreased by over 86%, from 10.22 to 1.56 days, and the change was statistically significant. Average time interval between diagnosis and certification has reduced from 18 months to about 10 months, a decrease of about 45%. The mean number of departments the beneficiary had to pass through for a single certification as per existing protocols has decreased by about 50%, from 2.64 to 1.35, which implies that the new well-defined protocols have saved precious time of the patient, caregiver and the treating professionals. About 4.69 sessions (hours) per person, were used for the administration of specific rating scales (other than IDEAS) in 2017, while the entire bulk of such administration has legally been shifted to clinical psychologist as per the 2018 guidelines.

Mean number of caregiver-days spent in the procurement of a certificate reduced by 3.5 times (6.25 vs 1.79) in the past year since the enforcement of new guidelines.

DISCUSSION:

About thrice more ID patients than MI (7-8% vs 2-3% of all disabled) were disabled as per Census of 2011.[40] Studies like Kashyap et al[41] reported 6.3:1 ratio (1794 and 285 patients) of cases of ID and MI over a three year period. The ratio of 3.77:1 ratio (222 and 59) in 2017, and even lesser 2.97:1 (202 and 68) in 2018, is possibly due to earlier presentation of patients for certification and better accounting for organic and childhood psychiatric conditions with the enforcement of newer guidelines.

Schizophrenia is the single most frequent disability diagnosis, about 40% and 41% in the two years in this study. This frequency is similar between the two years, but lesser

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than studies like Balhara et al[4] which reported 81% of patients with schizophrenia, and Chaudhury et al[42] which reported 64% of patients with schizophrenia, 30% with mood disorders, 16.7% with anxiety disorders; Kashyap et al also showed 65.3% schizophrenia, 12.6% bipolar disorder and 11.6% as other chronic psychosis including organic conditions, and Kumar et al[43] reported over 50% of diagnoses with affective disorders, in disability assessment and certification.

Patients from low (59%) and middle (28%) socioeconomic (SE) strata were predominant in a study by Venkatesan S,[14] while 63.2% in Kujur et al[44] and 43.8% in Balhara et al[4] were from low SE group. This is similar to the findings in our study where 67% and 72% were from low SE, and 28% and 18% from mid SE class, in the two groups respectively. In this study, both low and high income groups apparently benefitted more from the new changes in guidelines.

While previous studies show the use of IDEAS for mental illnesses and nonspecific IQ tools for ID, SQ has been exclusively used in this study as per new guidelines, since January 2018.[41]

Duration of certification since diagnosis is an important factor, as 2001 census show just about 30% (21.9 million identified disabled, out of 70 million estimated disabled) assessed for disability.[45,46] Time interval between diagnosis (first visit) and disability assessment was observed to be very short in our study, about 1.5 years further improving to just 9.8 months in the new guidelines year of 2018, compared to 2 to 5 years of range in Shihabudeen et al[47], and 3.84 years in Kujur et al,[44] but much better than the 11.88 years in Balhara et al.[4] Ali et al[13] advocate a standard period of three months since diagnosis, and at least three sessions of assessment, to be mandatory

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before certification.

As the rating scales were administered by psychologists, and SALD and SLD cases were to be certified by liaising departments, over four hours and 40 minutes per client spared for the psychiatrists in 2018 group, increasing the net time spent for management of disabled and other psychiatric OPD patients, as stressed by Kishore et al.[30] Shifting of administration of rating scales to the department of psychology is currently mandatory as per terms on assessment authority in the guidelines, however brief (VSMS) or complex (autism scales) may be the scales.[48,49] Hence freeing psychiatrists from the administration of rating scales has been proved time-saving.

There were scarcely any studies about the average number of allied departments and mean time spent for a certification. Kashyap et al listed discomfort to approach multiple departments, time delays, and passing over to other departments, have been specified as some of reasons for underutilization of disability certification.[41] Caregivers were financially important for 91.7% of patients in the study by Balhara et al, and 64% in 2011 Census.[40] In this study, 87.5% and 66.6% had earning primary caregivers spending 6.25 and 1.79 days for the patients on an average in the two groups respectively. The new certification logistics can be presumed to be easier than before, insofar as more patients apparently turned up for certificate by themselves, without caregivers having to accompany them. This is better when compared to the 62% of urban patients not accompanied by an earning family member, in the study by Kashyap et al.[41]

Though the guidelines appeared initially to alienate psychiatrists from certain psychiatric entities, genuine positives include quicker benefits lessening the distress and frustration for the loving caregivers, elevating their motivation and spirits, and

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providing an incentive to care for the unwilling family members.[14] It may encourage them to bring the client earlier for treatment, reducing the duration of untreated illness, and prognosis.

CONCLUSION:

Overall, the new guidelines for disability certification is a shift in paradigm, and has made the process less complicated. Liaison with departments[35] like Paediatrics, Neurology, ENT, Psychology, Speech therapy unit, PMR and Occupational therapy unit beginning with the in-depth evaluation during certification process, may extend multidisciplinary therapeutic benefits towards functional promotion.

Barring few limitations, this new Indian model of disability assessment guidelines is more client-oriented, with the best pragmatics so far, alleviating the intangible feeling of time loss, stress and burden in the client and his caregiver, and so relieving for the psychiatrists that they can well be adapted by other populous developing countries.

Limitations:

This study considered only the certifications of psychiatric conditions. Including all disability heads would have highlighted a similar, beneficial pattern, or a different one. The study did not deliberate on difficulties, if any, that the clients may encounter in the social welfare institutions for post-certification procedures. A larger study covering all the critical departments in the realm of disability certification would bring a more comprehensive picture.

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Tables:

Year	Certification by Psychiatrists	Certification by Allied Departments	χ^2(P value)
2013	386	2	15.09
2014	186	15	(<0.001†)

2015	137	16	
2016	269	11	
2017	259	22	
2018	178	92	

† P<0.01, Significant

Table 1: Frequency of Disability certification of psychiatric conditions by Psychiatry and Allied departments in the past six years

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Certification diagnostic heads	2017		2018		χ^2 (P value)
	By Psychiatric Department	By other Depts	By Psychiatric Department	By other Depts	
Autism spectrum disorders	12	1	12	2	20.09 (<0.001†)
Specific Learning disorders	28	0	0	44	
Intellectual disability	41	18	22	46	
Mental illness due to Chronic neurological conditions	2	3	14	0	
Organic psychosis	32	0	17	0	
Major depressive disorder	34	0	19	0	
Bipolar affective disorder	43	0	39	0	
Schizophrenia and related disorders	57	0	46	0	
Obsessive compulsive	10	0	9	0	

disorder					
Total	259	22	178	92	

†P<0.01 Significant

Table 2: Frequency of certification for various Psychiatric conditions in the past two years

	2017	2018	Statistic
n	281	270	
Socioeconomic status (monthly income), n(%)			
Low (<INR30000)	189	1[illegible]	χ^2 (P value) 9.21 (0.002†)
Medium (INR30000-90000)	79	48	
High (>90000)	[illegible]	27	

Table 3: Socio-economic data distribution between the two groups. †P<0.01 Significant.

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	2017	2018	Statistic
n	281	270	
Time interval between application & procurement of certificate (in days), Mean (sd)	10.22 (4.63)	1.56 (1.01)	to (P value) 14.41 (<0.001†)
No. of departments referred to/from, per certificate, Mean (sd)	2.64 (0.49)	1.35 (0.48)	7.65 (<0.001†)
No. of sessions‡ of active assessment needed, Mean (sd)			
-for IDEAS assessment	1.35 (0.42)	1.37 (0.54)	1.36 (0.170)
-for specific Rating scales	4.69 (1.89)	0 (0)	4.64 (<0.001†)
Time interval between diagnosis and certification (in months), Mean (sd)	18.25 (5.22)	9.83 (4.12)	6.33 (0.018*)
No. of caregiver-days spent for	6.25 (2.51)	1.79 (1.09)	10.45 (<0.001†)

procuring certificate, Mean (sd)			

*P<0.05, †P<0.01 Significant. ‡sessions of 60minutes each

Table 4: Chronological interval data between different crucial visit dates, yearly averages. MSE, Mental Status Examination. IDEAS, Indian Disability Evaluation and Assessment Scale.

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	Disability percentage			
Year of Guideline modifications	1981*	2001	2002	2018‖
a.**Intellectual disability** (ID)				ID
IQ			(D =110-IQ)	SQ
80-89	25	0	20-30	0ŧ
70-79	0	0	30-40	25§
50-69 60-69 50-59	50 75 100	50	40-60	50‖
35-49	100	75	60-75	75¨
20-34	100	90	75-90	90
<20	100	100	90-110	100
b.**Intellectual Impairment** (II) in **Neurological conditions** (NC)				II in MI and NC ††
IQ				IQ
80-89	25	0	0	0

70-79	50	25	25	0
50-69		50	50	50
60-69	75			
50-59	100			
35-49	100	75	75	75
20-34	100	90	90	90
<20	100	100	100	100

Table 5: Change of Intellectual Disability(ID) calculation with changing guidelines. wrt, with respect to. IQ, Intelligence Quotient. *ID was under Neurological conditions head alone in 1981 guidelines. †Social Quotient(SQ) alone is to be used instead of IQ since 2018. ‡for an SQ of >84. §for an SQ of 70-84. ||for an SQ of 55-69. **for an SQ of 36-54. ††IQ to be used for Intellectual deficits occurring in Mental Illnesses(MI) and NC.

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